

(19)



Europäisches Patentamt  
European Patent Office  
Office européen des brevets



(11) Publication number:

**0 467 279 A3**

(12)

## EUROPEAN PATENT APPLICATION

(21) Application number: **91111818.0**

(51) Int. Cl.<sup>5</sup>: **C07K 7/10, A61K 37/02**

(22) Date of filing: **16.07.91**

(30) Priority: **18.07.90 JP 187959/90**

(43) Date of publication of application:  
**22.01.92 Bulletin 92/04**

(84) Designated Contracting States:  
**AT BE CH DE DK ES FR GB GR IT LI LU NL SE**

(68) Date of deferred publication of the search report:  
**05.08.92 Bulletin 92/32**

(71) Applicant: **TAKEDA CHEMICAL INDUSTRIES, LTD.**  
**1-1, Doshomachi 4-chome**  
**Chuo-ku, OSAKA(JP)**

(72) Inventor: **Kitada, Chieko**  
**2-8, Minamikoycho 1-cho**  
**Sakai, Osaka 590(JP)**  
Inventor: **Watanabe, Takuya**  
**7-9-903, Kasuga 1-chome**  
**Tsukuba, Ibaraki 305(JP)**

(74) Representative: **von Kreisler, Alek,**  
**Dipl.-Chem. et al**  
**Patentanwälte Von Kreisler-Selting-Werner,**  
**Delchmannhaus am Hauptbahnhof**  
**W-5000 Köln 1(DE)**

(54) **Polypeptides having c-AMP producing activity.**

(57) A polypeptide or a pharmaceutically acceptable salt thereof having c-AMP-producing activity is disclosed, the polypeptide being represented by the following general formula:

**X-Ser-Asp-Gly-Ile-Phe-Thr-Asp-Ser-Tyr-Ser-Arg-Tyr-Arg-**

**Lys-Gln-Met-Ala-Val-Lys-Lys-Tyr-Leu-Y (X-SEQ ID NO:2-Y)**

wherein X represents any amino acid residue or an acyl group, and Y represents NH<sub>2</sub>, OH, Ala-NH<sub>2</sub>, Ala-OH, Ala-Ala-NH<sub>2</sub>, Ala-Ala-OH, Ala-Ala-Val-NH<sub>2</sub> or Ala-Ala-Val-OH.

EP 0 467 279 A3



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number

EP 91 11 1818

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	PROCEEDINGS OF THE 19TH ANNUAL MEETING OF THE SOCIETY FOR NEUROSCIENCE, 1989, PHOENIX, ARIZONA, USA 1990, PHOENIX, USA page 1277; MIYATA ET AL: 'Isolation and characterization of a novel ovine hypothalamic polypeptide which stimulates adenylyate cyclase in rat pituitary cell cultures' * See Abstract 506.12 *	1-13	C07K7/10 A61K37/02
A	ENDOCRINOLOGY vol. 127, no. 1, 1990, BALTIMORE, USA pages 264 - 271; KOVES ET AL: 'Immunohistochemical demonstration of a novel hypothalamic peptide, Pituitary Adenylyate Cyclase Activating Polypeptide, in the ovine hypothalamus' * See Abstract and Discussion *	1-13	TECHNICAL FIELDS SEARCHED (Int. Cl.5)  C07K
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 05 JUNE 1992	Examiner KORSNER S.E.
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document  T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document			

EPO FORM 150 CL.52 (P0001)